

REMARKS

Claims 1, 4, 9 and 19 are amended herein. Claims 2-3, 5-6, 11-18 and 20 are canceled. New claim 21 is added. Support for the amendment is found for example, at page 28, lines 5-6, page 15, lines 28-34, page 28, lines 7-10, page 68, lines 18-25 and in the original claims. No new matter is presented.

I. Election/Restrictions

In paragraph 1 of the Action, the Examiner acknowledges Applicants' election without traverse.

The claims are amended by deleting the non-elected subject matter.

Since Applicants elected to prosecute compound claims, Applicants should be entitled to composition claims and claims directed to methods of treatment using the compounds if the compound claims are found to be allowable and if the composition and method claims depend from or otherwise recite all elements of the product claims. See MPEP § 821.04.

Claim 10 recites a pharmaceutical composition which comprises the spiro-piperidine compound according to claim 1.

Claim 19 is amended to recite a method of treatment of specific diseases or conditions, which comprises administering to a mammal an effective amount of the spiro-piperidine compound according to claim 1.

In view of the above, examination of claims 10 and 19 is respectfully requested or, alternatively, rejoinder of claims 10 and 19 is respectfully requested.

II. Response to Claim Objections

Claim 1 is objected to for being vague and indefinite. According to the Examiner, either “ring A” nor “ring B” contain an article in front of it. The Examiner suggests that Applicants insert the word “a” before “ring A and the first “ring B” in Claim 1. The Examiner also suggests that the word “the” should appear before the second “ring B.”

Claim 4 is objected to for being vague and indefinite. The Examiner suggests that Applicants insert the word “the” before the words “ring B” in Claim 4. Appropriate correction is required.

Applicants do not believe that the suggested claim amendments are necessary. However, claim 1 is amended as suggested by the Examiner in an effort to facilitate and expedite examination, not for purposes of patentability. Claim 4 as presently amended does not recite “ring B”, and therefore this aspect of the objection is rendered moot:

Accordingly, Applicants respectfully request withdrawal of the claim objection.

III. Response to Claim Rejections under 35 U.S.C. § 102

A. Teranishi et al

Claims 1-7, and 9 are rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by Teranishi et al; EP 70,171. See CA 1983:470751.

B. JP 59-059685

Claims 1-7, and 9 are rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by Kyowa Hakko Kogyo Co.; JP 59-059685.

C. Takai et al

Claims 1-7, and 9 are rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by Takai et al.; Chem. Pharm. Bull. 36(12), 4659-70.

D. Uesaka et al

Claims 1-7, and 9 are rejected under 35 U.S.C. §102(a) as allegedly being anticipated by Uesaka et al.; WO 2003028732. See CA 2003:282402.

E. Chaturvedula et al.

Claims 1-7, and 9 are rejected under 35 U.S.C. § 102(e) as allegedly being anticipated by Chaturvedula et al.; US 2004/0204397.

F. Applicants' Response

Claim 1 is amended herein to delete the recitation, "ring A may be further condensed with ring B, and ring B represents a 3- to 8-membered monocyclic carbon ring or hetero ring which may have a substituent(s)". Thus, the compounds of the present invention as recited in amended claim 1 do not have a spiro ring structure of three rings in which two of the rings (corresponding to ring A and ring B) are condensed. This is supported by the specification at page 28, lines 5-6.

Further, 9-benzyl-1,3-dimethyl-1,3,9-triazospiro[5.5]undecan-2-one; 1,3-dimethyl-1,3,9-triazaspiro[5.5]undecan-2-one; 9-benzyl-1-methyl-1,3,9-triazospiro[5.5]undecan-2-one; and 1-methyl-1,3,9-triazaspiro[5.5]undecan-2-one are specifically excluded from the scope of formula (I) as recited in amended claim 1.

Each of Teranishi et al., JP '685, Takai et al and Chaturvedula et al have a spiro ring structure of three rings in which the two rings corresponding to A and B are condensed as shown in the first page of the attached Appendix. Thus, the presently claimed compounds are different from those taught by these references.

Uesaka et al teaches compounds wherein the ring A has a methyl group at the 1 position of the tetrahydropyrimidin-2-(1H)-one ring, i.e., ring A as shown on the second page of the attached Appendix. Thus, the presently claimed compounds are different from those taught by Uesaka et al.

In view of the above, none of the cited references discloses, teaches or suggests the presently claimed invention. Claims 2-3 and 5-6 are canceled, thereby rendering the rejection as to these claims moot. Claims 4 and 9 depend from claim 1 and are patentable for at least the same reasons.

Accordingly, Applicants respectfully request withdrawal of the §102 rejections.

IV. Response to Claim Rejections under 35 U.S.C. § 103

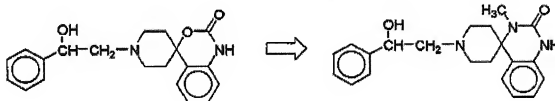
Claims 1-7, and 9 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Mirzadegan et al in view of Poindexter et al (WO 01/13917) and Berger et al (US 3,301,857).

The Examiner considers that the presently claimed invention is obvious on the ground that in drug design, the purpose of exchanging one bioisotere for another is to enhance the desired biological or physical properties of a compound without making significant changes in chemical structure.

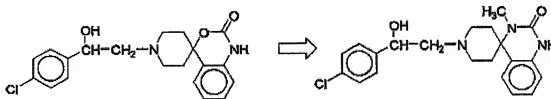
Applicants respectfully traverse the rejection.

Applicants submit that the change of the atom on the spiro ring using bioisotere does not always enhance the activity based on EP 0 070 171 A1 (the cover page and relevant pages 5, 8 and 22 are attached).

In EP '171, when the oxygen atom on the spiro ring in Compound No. 2 is replaced with a nitrogen atom (Compound No. 11), both compounds have similar blood pressure reduction effect (see Table 6).



On the other hand, when the oxygen atom on the spiro ring in Compound No. 9 is replaced with a nitrogen atom (Compound No. 10), the blood pressure reduction effect is lowered (Table 6).



Accordingly, whether or not the compound in which the constitution atom in the spiro ring is replaced with a nitrogen atom has similar pharmacological activity is not obvious.

Therefore, whether or not the compound of the presently claimed invention has high CCR5 antagonism can not easily be expected.

Furthermore, in the compounds of the present invention as recited in present claim 1, ring A is not condensed with ring B. The compound having no condensed rings in the spiro ring structure according to the present invention has a quite different structure from the compound having condensed rings in the spiro ring structure according to the cited references. Therefore, even if the compound having condensed rings has CCR2 antagonism, whether or not compounds having no condensed rings has CCR5 antagonism can not easily be expected.

Claims 2-3 and 5-6 are canceled, thereby rendering the rejection as to these claims moot. Claims 4 and 9 depend from claim 1 and are patentable for at least the same reasons.

Accordingly the present invention is not rendered obvious by the cited references and Applicants respectfully request withdrawal of the §103 rejection.

V. Allowed Claim 8

Claim 8 is indicated as being allowed in the Action dated April 5, 2007. Applicants submit that claim 8 depends from claim 1 and is patentable for at least the same reasons. The cited references do not disclose teach or suggest the subject matter of claim 8. For this additional reason claim 8 is patentable over the cited references.


VI. Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the

Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,


Jennifer M. Hayes
Registration No. 40,641

SUGHRUE MION, PLLC
Telephone: (202) 293-7060
Facsimile: (202) 293-7860

WASHINGTON DC SUGHRUE/265550

65565

CUSTOMER NUMBER

Date: October 4, 2007